

Notice of Allowability

Application No.

10/754,546

Examiner

(Nancy) Thanh-Nhan P. Nguyen

Applicant(s)

KOO ET AL.

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/27/2006.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20070102.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 12/27/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


David Nelms
Supervisory Patent Examiner
Technology Center 2800

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed on December 27, 2006 has been considered.

Drawings

Figures 1 and 3-7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

Claims 1-13 are allowed.

Reasons for Allowance

Claims 1-13 are allowed since there is no prior art of record that teaches or suggests a flat panel display having a matrix-type array of sub-pixels comprising a relationship of various elements as claimed with the specific allowable subject matter cited in the following claims:

Claim 1:

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- the driving thin film transistor comprises semiconductor channels, which are derived from a semiconductor layer
- heterogeneous straight lines are separated from each other on the semiconductor layer
- wherein at least one of the semiconductor channels comprise at least one of the heterogeneous straight lines
- an imaginary line connecting the semiconductor channels of one column is not parallel to the heterogeneous straight lines

Claim 10:

- the driving thin film transistor comprises semiconductor channels, which are derived from a semiconductor layer
- heterogeneous straight lines are separated from each other on the semiconductor layer
- wherein each of the semiconductor channels comprises at least one of the heterogeneous straight line

Claims 2-9 and 11-13 are allowed since they depend on the allowed claims 1 and 10, respectively.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Admission discloses the driving thin film transistor comprises semiconductor channels, which are derived from a semiconductor layer, wherein

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heterogeneous straight lines appear randomly in the semiconductor channels, and wherein an imaginary line connecting the semiconductor channels of one column is parallel to the heterogeneous straight lines.

Masumitsu et al (JP 10-012891) discloses crystal defect in channel field. However, the crystal defect is not in each channel field (as in "prior art" discussion). Masumitsu et al further discloses boundary appears between each exposure field when doing laser beam irradiation. However, with final product, there is no crystal defect included to the channel fields (as in "current invention" discussion).

Ohtani et al (U.S. Patent No. 6,303,963) discloses the semiconductor channels in thin film transistors formed from semiconductor layer after being crystallized.

Komiya et al (U.S. Patent No. 6,456,013) discloses an imaginary line connecting the semiconductor channels of one column is not a straight line.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
Art Unit 2871

TN



David Nelms
Supervisory Patent Examiner
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